

# Mineral Industry Surveys

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## MANGANESE IN MARCH 2006

On a gross-weight basis, reported consumption of manganese ore containing 35% or more manganese, exclusive of that consumed at iron and steel plants, was 27,400 metric tons (t) in March 2006, which was a 50% increase compared with that in February 2006, according to the U.S. Geological Survey. This figure increases to 29,800 t when estimates for annual respondents are added on the basis of 2005 data. Corresponding industry stocks of ore at the end of the month were 280,000 t, which includes an estimate for annual respondents on the basis of 2005 data. This was a 7% decrease from that of February 2006. Domestic consumption of manganese ore during the first quarter of 2006 was 85,500 t. First quarter 2006 consumption was 14% lower than that of the revised first quarter 2005

(99,400 t) and 21% lower than that of the revised fourth quarter 2005 (108,000 t).

The following comparisons of trade data were made on the basis of manganese content (table 1). The data for February 2006 tabulated in this report indicate that the total exports of 1,260 t were 28% lower than those of the prior month, owing to a decrease in exports of ferromanganese. Manganese imports were 80,100 t, which was an increase of 74% compared with those of January 2006. The increase in manganese imports was primarily attributable to increases in ferromanganese, manganese ore, and silicomanganese imports.

### Ferroalloy Prices, manganese content

	High-carbon ferromanganese <sup>1</sup> (dollars per gross ton)	Medium-carbon ferromanganese <sup>1</sup> (cents per pound)	Silicomanganese <sup>1</sup> (cents per pound)	Manganese metal <sup>2</sup> (cents per pound)
March 2	720.00-750.00	59.00-62.00	37.00-39.00	68.00-70.00
March 9	730.00-760.00	59.00-62.00	37.00-39.00	70.00-72.00
March 16	740.00-760.00	59.00-63.50	36.00-39.00	74.00-76.00
March 23	750.00-770.00	64.00-65.00	36.00-39.00	74.00-76.00
March 30	760.00-780.00	64.00-65.00	36.00-39.00	71.00-76.00

### Ore Prices, dollars per metric ton unit, manganese content<sup>3</sup>

	44% Manganese Ore <sup>2</sup>	48% Manganese Ore <sup>2</sup>
March 2	1.85-1.95	2.30-2.40
March 9	1.85-1.95	2.30-2.40
March 16	1.85-1.95	2.30-2.40
March 23	1.85-1.95	2.30-2.40
March 30	1.85-1.95	2.30-2.40

<sup>1</sup>Source: Platts Metals Week, dealer import price.

<sup>2</sup>Source: Ryan's Notes, North American transaction price.

<sup>3</sup>To determine dollars per metric ton, multiply the manganese content percentage by the price.

TABLE 1  
SELECTED U.S. FOREIGN TRADE IN MANGANESE<sup>1</sup>

(Metric tons, manganese content)<sup>2</sup>

	Imports for consumption			Exports		
	Ore and dioxide	Ferroalloy and metal	Total	Ore	Ferroalloy and metal	Total
2005:						
February	40,700	29,000	69,700	111	1,170	1,280
January-February	48,300	74,000	122,000	273	2,120	2,400
2006:						
January	20,300	25,600	45,900	46	1,710	1,760
February	27,500	52,600	80,100	87	1,170	1,260
Total	47,700	78,300	126,000	133	2,880	3,020

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>As reported except as estimated for imports of manganese dioxide and manganese waste and scrap and for exports from gross weights.

Source: U.S. Census Bureau.

TABLE 2  
U.S. IMPORTS FOR CONSUMPTION OF SILICOMANGANESE IN FEBRUARY 2006<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
Australia	2,310	1,550	\$1,450,000	2,310	1,550	1,450,000
Georgia	7,000	4,600	4,600,000	7,000	4,600	4,600,000
Korea, Republic of	6,000	3,850	4,420,000	6,000	3,850	4,420,000
Mexico	1,500	984	1,050,000	2,030	1,330	1,360,000
Norway	5,950	3,900	4,490,000	12,900	8,300	11,100,000
South Africa	16,800	11,200	10,500,000	26,300	17,300	16,400,000
Total	39,500	26,100	26,500,000	56,600	36,900	39,300,000

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 3  
U.S. IMPORTS FOR CONSUMPTION OF FERROMANGANESE IN FEBRUARY 2006<sup>1</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>2</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>2</sup>
<b>Low carbon:</b>						
China	933	844	\$1,380,000	1,600	1,440	\$2,350,000
Korea, Republic of	980	788	1,190,000	5,840	4,750	5,580,000
Mexico	905	733	909,000	1,630	1,300	1,640,000
South Africa	216	210 <sup>3</sup>	348,000	374	341	611,000
Total, low carbon	3,040	2,580	3,820,000	9,430	7,840	10,200,000
<b>Medium carbon, 1%-2% C:</b>						
Korea, Republic of	1,300	1,060	1,120,000	1,300	1,060	1,120,000
Mexico	1,770	1,410	1,600,000	2,620	2,080	2,440,000
South Africa	3,180	2,590	2,480,000	3,840	3,130	2,890,000
Total, m.c., 1%-2% C	6,240	5,060	5,200,000	7,760	6,270	6,450,000
<b>High carbon:</b>						
Australia	1,500	1,010 <sup>3</sup>	865,000	2,500	1,780	1,440,000
Brazil	1,500	1,190	676,000	1,500	1,190	676,000
France	1,500	1,170	764,000	1,500	1,170	764,000
Mexico	5	4	5,720	5	4	5,720
South Africa	17,700	13,700	8,970,000	24,900	19,300	12,400,000
Total, high carbon	22,200	17,000	11,300,000	30,400	23,400	15,300,000
Grand total	31,500	24,700	20,300,000	47,600	37,500	31,900,000

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>3</sup>All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau.

TABLE 4  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE ORE (20% OR MORE Mn) IN FEBRUARY 2006<sup>1,2</sup>

(Metric tons)

Source	Gross weight	Mn content	Customs value <sup>3</sup>	Year to date		
				Gross weight	Mn content	Customs value <sup>3</sup>
<b>More than 20%, but less than 47% manganese:</b>						
China	--	--	--	926	301	\$54,100
<b>47% or more manganese:</b>						
Australia	--	--	--	11,100	5,650	1,580,000
Belgium	18	13	15,000	37	25	30,000
Brazil	1,480	755	122,000	1,480	755	122,000
China	993	497	59,600	993	497	59,600
Gabon	48,800	24,100	5,090,000	75,400	37,000	6,830,000
Morocco	--	--	--	20	10	6,000
Total	51,300	25,400	5,290,000	89,000	43,900	8,620,000
Grand total	51,300	25,400	5,290,000	89,900	44,200	8,680,000

-- Zero.

<sup>1</sup>Quantities for general imports and imports for consumption are identical.

<sup>2</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>3</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Source: U.S. Census Bureau.

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE DIOXIDE IN FEBRUARY 2006<sup>1</sup>

(Metric tons, gross weight)

Source	Quantity	Customs value <sup>2</sup>	Year to date	
			Quantity	Customs value <sup>2</sup>
Australia	646	\$869,000	904	\$1,200,000
Belgium	--	--	118	340,000
Brazil	20	10,200	60	30,400
China	2,320	2,520,000	3,540	3,760,000
Colombia	4	6,750	4	6,750
France	(3)	3,920	(3)	3,920
Germany	15	84,800	23	116,000
Japan	506	719,000	977	1,330,000
Mexico	--	--	150	183,000
United Kingdom	(3)	2,280	(3)	2,280
Total	3,510	4,220,000	5,780	6,980,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

<sup>3</sup>Less than ½ unit.

Source: U.S. Census Bureau.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF MANGANESE METAL IN FEBRUARY 2006<sup>1</sup>

(Metric tons)

Source	Gross weight	Customs value <sup>2</sup>	Year to date	
			Gross weight	Customs value <sup>2</sup>
<b>Unwrought flake:</b>				
China	632	\$921,000	1,170	\$1,660,000
South Africa	246	416,000	594	1,070,000
Total	878	1,340,000	1,770	2,720,000
<b>Unwrought powder:</b>				
China	117	103,000	177	181,000
South Africa	296	533,000	335	606,000
Total	413	636,000	512	787,000
<b>Unwrought, other:</b>				
Germany	--	--	216	404,000
South Africa	160	247,000	300	499,000
Spain	225	367,000	300	489,000
Total	385	614,000	816	1,390,000
<b>Other manganese, wrought:</b>				
Brazil	--	--	294	210,000
China	150	198,000	266	347,000
France	6	61,000	10	98,000
Total	156	259,000	570	655,000
Grand total	1,830	2,850,000	3,660	5,560,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Customs value generally represents a value in the foreign country and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the material into the United States.

Note: Imports for consumption of metallic manganese waste and scrap totaled 125 tons, all of which was from Canada, to give a year-to-date total of 263 tons.

Source: U.S. Census Bureau.

TABLE 7  
U.S. EXPORTS OF MANGANESE ORE (20% OR MORE Mn), FERROMANGANESE,  
SILICOMANGANESE, AND MANGANESE METAL BY COUNTRIES OF DESTINATION IN FEBRUARY 2006<sup>1</sup>

(Metric tons, gross weight)

	Manganese ore		Ferromanganese, 2% or less C		Silicomanganese		Manganese metal <sup>2</sup>	
	February	Year to date	February	Year to date	February	Year to date	February	Year to date
Australia	--	--	--	--	3	5	--	--
Belgium	--	--	--	--	--	--	281	442
Canada	118	182	801	1,960	--	--	44	84
China	35	35	--	--	--	--	--	--
Colombia	--	--	--	--	--	--	--	1
Dominican Republic	--	9	--	--	--	--	--	--
Germany	--	--	--	--	--	--	16	16
Indonesia	--	20	--	--	--	--	--	--
Japan	--	--	--	--	--	--	60	111
Malaysia	--	--	--	--	--	--	--	3
Mexico	--	--	--	--	11	22	1	1
Netherlands	--	--	100	100	9	9	--	--
Poland	21	21	--	--	--	--	--	--
Portugal	--	--	--	--	--	--	2	2
Sweden	--	--	--	--	--	--	16	16
Trinidad and Tobago	--	--	--	--	--	--	--	1
<b>Total</b>	<b>174</b>	<b>267</b>	<b>901</b>	<b>2,060</b>	<b>23</b>	<b>37</b>	<b>420</b>	<b>676</b>

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes manganese-aluminum, some other alloys, and waste and scrap.

Note: Exports of ferromanganese with more than 2% carbon totaled 33 tons, all of which went to Canada, to give a year-to-date total of 708 tons.

Source: U.S. Census Bureau.

TABLE 8  
U.S. FOREIGN TRADE IN SELECTED MANGANESE CHEMICALS IN FEBRUARY 2006, BY CLASS<sup>1</sup>

Class	Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)	Year to date		
				Gross weight (metric tons)	Value <sup>2</sup> (thousands)	Principal sources and destinations: gross weight (metric tons); value <sup>2</sup> (thousands)
<b>Imports for consumption:</b>						
Manganese oxides other than dioxide	349	\$261	Mexico 174; \$76	1,030	\$871	Mexico 434; \$185
Manganites, manganates, and other permanganates	8	17	Japan 8; \$17	8	17	Japan 8; \$17
Potassium permanganate	64	144	Germany 28; \$60	170	367	Czech Republic 74; \$159
Sulfates, basket category, including manganese sulfate	3,880	2,590	Mexico 2,380; \$1,260	8,630	4,700	China 3,930; \$1,640
<b>Exports:</b>						
Manganese dioxide	377	352	Canada 200; \$127	882	745	Canada 534; \$309
Manganese oxides other than dioxide	2,020	909	Canada 1,870; \$676	3,720	1,830	Canada 3,410; \$1,260
Manganites, manganates, and other permanganates	3	6	Canada 3; \$6	7	15	Canada 7; \$15
Potassium permanganate	319	713	Spain 280; \$592	731	1,750	Spain 562; \$1,210
Sodium permanganate	27	75	China 11; \$30	67	167	Japan 15; \$37
Sulfates, basket category, including manganese sulfate	1,300	957	Canada 909; \$605	2,870	2,290	Canada 2,080; \$1,150

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>For imports, Customs value; for exports, free alongside ship value.

Source: U.S. Census Bureau.